

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY Poland

REPORT

SUBJECT The Precision Instruments Factory
in Swidnica

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

1. The Precision Instruments Factory (Zaklady Wytworcze Aparatury Precyzyjnej) is the official designation of a semimilitary plant which is situated at No. 26-28 Lukasinskiego Street, Swidnica (Schweidnitz), and is one of the largest factories in that predominantly industrial town. Under German rule the enterprise was known as Helicwat and manufactured electric consumption meters. Judging from the equipment and materials subsequently found at the plant, production was apparently expanded to include telephone exchanges and military communication apparatus during the course of the Second World War. 25X1
2. After the Poles took over the plant in 1945, considerable changes were instituted. The enterprise was called the State Calculator Factory until 1951 or 1952, when the present designation was adopted. During the first years after the transfer of ownership, manufacture of the previous products was continued, since a considerable stock of materials had been taken over. Production of telephone exchanges and military communication apparatus was assigned to the Communications Instruments Factory in Krakow. 25X1
3. In approximately 1948, the German stocks were exhausted, and the plant began using locally-made materials. Simultaneously, the manufacture of automatic locks (automaty schodowe) was started, which together with the two previously produced items (consumption meters and gauges) represented the entire output until 1952. In that year a special construction office was established under the name of B.K.D. (Biuro Konstrukcyjne "D" - Construction Bureau "D"). This new section received blueprints of certain components and of the machinery for their production, as well as technical specifications in Russian. All these documents bore the stamp of the Second Department of the Polish General Headquarters (GHQ) 25X1

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(Note: Washington distribution indicated by "X"; Field distribution by "#")														

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4. While a team of experts was engaged in translating the aforementioned material into Polish, expansion of the plant was undertaken. One of the departments was removed from the premises, and a new department for "special products" [redacted] with its own managers and foremen, was established and subsequently started production of a series of aircraft gauges. Listed in the chronological order in which they were turned out by the factory, these items included the following:

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- a. An instrument, judged by all technical indication constituting an oil pressure gauge;
- b. A manometer, apparently for measuring air pressure;
- c. A thermometer with a scale from -60 degrees C. to 70 degrees C.;
- d. An artificial horizon (sztuczny horyzont);
- e. The fifth and sixth items of the series were signal apparatus [redacted] apparently indicators and warning lights for aircraft instruments.

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Until late 1953, the aforementioned constituted the entire military output of the plant and was destined for the MIG-15 and other types of aircraft. In the beginning of the same years civilian production of the plant was extended to wattmeters [redacted].

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5. Towards the end of 1953, the plant employed some 1,500 men working in two shifts. It was then divided into a number of departments [redacted] and subdepartments [redacted], concerning which the following details are reported: [redacted]

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-A. comprised the following:

- a. No. 1 Mechanical subdepartment [redacted] This section carried out mechanical processing of metal parts, and was equipped with some 40 punch presses and pneumatic hammers of German and Czech make ranging from 1 to 100 tons; and five spot welding sets [redacted]
- b. No. 2 Mechanical subdepartment, whose equipment included: approximately 20 medium-sized automatic lathes, principally for small work pieces, most of which were products of the Soviet Leningrad plant, while others were of [redacted] make (Index and Petermann); close to 25 German vertical drilling machines; four or five German turret lathes; various screw-cutting, planing and polishing machines;
- c. Galvanizing and anodizing subdepartment (Oddzial Galwanizerni i Elokssalacji), which carries out chrome and nickel plating, electrolysis of aluminum parts, and rust-proofing chemical treatment. Its equipment includes: some 100 galvanizing vats (wanny galwanizacyjne) and eight similar receptacles called galvanizing goblets (kielichy galwaniczne), four twin-wheel polishing machines (bzylifierki i polerki dwutarczowe); five twin-polishing drums (bebnay polerskie) and three simple polishing drums; two electrically heated and 10 gas-heated drying installations (suszarki).
- d. Varnishing subdepartment (Oddzial Lakierni), with the following equipment: seven single varnishing stands (stanowiska lakiernicze pojedyncze); one automatic varnisher; one mobile gas-heated drying installation; three electrically heated twin drying installations; one infrared drying stand; one gas-heated degreasing installation.

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- e. Subdepartment for first-assembly [] equipped with: one punch press; one automatic wirecutter; one planing machine; four or five drilling machines. 25X1

The department is concerned with military and civilian production, with the exception of the first-assembly subdepartment which deals exclusively with civilian articles.

6. Wydzial - B comprised the following:

- a. Bakelite subdepartment (Oddzial Bakeliciarni), which produces plastic components and is equipped with 18 to 20 bakelite presses, most of them hydraulic, of up to 120 tons, three of German make and the others from the Czech Skoda factory; 20 to 25 electrically operated cleaning brushes. 25X1
- b. Coil-winding subdepartment (Oddzial Nawujalni) with the following machinery: four [] automatic coil winders for wires with diameters from 0.08 to 0.2 mm.; five semi-automatic coil winders of German manufacture; four coil winders for wires with diameters from 2 to 4 mm. 25X1
- c. Assembly subdepartment [], whose work is carried out without the aid of mechanical equipment. 25X1
- d. Calibration subdepartment [] for electric consumptionmeters, equipped with the following: eight test-boards [] for one phase meters and two boards for three-phase meters; two high tension insulation testers. 25X1
- e. Packing subdepartment []. 25X1

This department is not concerned with the manufacture of military products.

7. Wydzial - III, the heat processing department for military and civilian products, had the following mechanical equipment;

- a. Eight small and medium-sized electric annealing furnaces;
- b. Two small gas annealing furnaces;
- c. Two large gas annealing furnaces;
- d. One metal punch press;
- e. One varnishing stand. 25X1

This department included a magnetizing shop [].

8. Wydzial IV, the calibration and assembly department for electric gauges and automatic locks. The only mechanical equipment of this shop consisted of a few miniature lathes and test boards. 25X1

9. Wydzial V, the special department for military products, [] comprised the following subdepartments:

- a. Precision instruments' subdepartment [], which produced apparatus requiring a greater degree of accuracy than could be achieved in other sections of the plant. Its equipment included one punch press; one varnishing stand; 12 to 15 lathes; various metal-working machinery. 25X1

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- b. Assembly subdepartment [redacted] whose sole mechanical equipments were three coil winding machines.
- c. Testing Section [redacted], for the final examination of all military products.

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The personnel of Wydział V totalled 80 to 100 workers.

- 10. The total staff of the departments, which were directly concerned with production, numbered about 1,000 workers. In addition to the administrative sections which differed in no way from the known structure of similar Polish enterprises, the plant comprised in addition the following:

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- a. The Machine Tool Shop [redacted], for the manufacture of tools and jigs required at the factory. This shop was comparatively large, employing some 130 workers, and was equipped with the following machinery: 12 to 15 lathes; six to eight planing machines; four to five polishing machines; a high precision "SIP" drill of Western manufacture; a number of regular drilling machines; sawing machines; hand-operated punch presses, and other similar equipment.
- b. Chief Mechanic's department [redacted] for the repair and maintenance of mechanical equipment. This shop employed some 80 workers, and comprised the following machinery: four lathes; a number of planing and drilling machines; and various welding sets.
- c. Large raw material stores, which were equipped with three metal sawing machines and three sheet-metal cutters.
- d. Finished products' stores;
- e. Garage and repairshop for the following plant vehicles: two buses for transporting the staff; five trucks; one pick-up truck; two tractors; and the manager's car.

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- 11. Among other important sections of the plant were the following:

- a. Chief technologist's department, with a staff of some 30 engineers and technicians, and composed of sections for blueprint and technical specifications; material analysis; and design of auxiliary equipment.
- b. Chief designer's office, with an experimental laboratory and a staff of close to 25 workers.
- c. Technical control, which carried out examination of components and finished products, and comprised chemical and electrical laboratories.

The three technical sections worked for all departments of the enterprise.

- 12. With regard to the military products of the enterprise the following specifications are reported:

- a. Manometers. These instruments have the shape of a cylinder approximately 120 mm. long and some 80 mm. in diameter. The housing is made of anodized aluminum, chemically treated with black paint, varnished, and dried. The face of the manometer is identical in material and processing with the housing, and protected by glass. The figures are engraved and coated with a fluorescent material (radium), and the indicators made of anodized aluminum in its natural color, also with a fluorescent coating. The remaining components are made of brass, copper, steel, aluminum, and various alloys, all of which are galvanized or chemically treated.

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- b. Thermometers. The plant manufactured only the housing, while the working components were imported from the USSR. The housing is nickel-plated steel, with an overall length of 150 mm.; one end bears a screw thread and union; the distance between the lower edge of the latter and the other end of the housing is 132 - 140 mm.
- c. Artificial horizons. This instrument has the shape of a cylinder with a length of approximately 100 mm. and a diameter of some 80 mm. The housing is made of anodized aluminum coated with a chromium compound. On the glass-protected face of the instrument appears the silhouette of a miniature airplane. Only one production series of this instrument was turned out by the plant, and towards the end of 1953, its manufacture was assigned to the A-6 works in Warsaw.
- d. Warning Indicators. Housed in a box of galvanized sheet-steel, approximately 35 mm. by 130 mm. by 180 mm. in size.
13. The plant did not completely master the production technique of the military products until the end of 1953, particularly with regard to accuracy. Discounting rejects, the monthly output did not exceed 60-80 instruments of each type, all of which were shipped to aircraft factories at the following locations: the Psie Pole quarter of Wroclaw (Breslau); Mielec near Rzeszow (N 50-03/E 22-00), and Swidnik (N 51-15/E 22-41) near Lublin.
14. With regard to civilian products, the monthly output during 1953, amounted to the following:
- a. Electric consumption meters (one-phase): 25,000- 27,000.
 - b. Electric consumption meters (three-phase): 2,800 - 3,500.
 - c. Electric gauges: 400 - 600.
 - d. Automatic locks: 300 - 500.
15. The following personalities of the Precision Instruments' Factory in Swidnica are known:
- a. Dziedzic (fnu), head of the tool making department and a mechanical engineer [redacted] 25X1
 - b. Kolodziejczyk (fnu) [redacted] has been the chief technologist [redacted] 25X1
 - c. Kumela (fnu), [redacted] 25X1
 - d. Wlodzimierz Manowski, [redacted] has been the production manager since 1952; [redacted] 25X1

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- e. Bogdan Micinski, [] has headed the technical control department for several years. [] 25X1
- f. Romuald Schmidt, about 50, chief mechanic since 1951-1952. [] 25X1
- g. Tadeusz Slomczynski, [] has been chief engineer for a number of years. An electrical engineer. [] 25X1
- h. Borys Weiser, [] has headed the investment department since 1954. [] 25X1
- i. Mieczyslaw Wojciechowski, [] has been the production manager of the military department since 1954. [] 25X1
- j. Wacław Wyszynski, [] was director of the plant from 1952 until 1955, [] 25X1
16. [] rough sketches of the three floors of the plant, with a list of the offices and departments located on them. [] 25X1

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Legend to Sketch "A" - General Location and Ground Floor of the Plant

- A. Offices and canteen
- B. Production and auxiliary departments
- I. Lukasinskiego Street
- II. Gdynska Street
- III. Residential houses
 - 1. Buffet
 - 2. Gatekeeper's lodge and guard room
 - 3. Warehouses
 - 4. Chief mechanic's department
 - 5. Locksmith's shop
 - 6. Heat processing department
 - 7. Tool making department (Narzedziownia)
 - 8. No. 2 Mechanical Department
 - 9. No. 1 Mechanical Department
 - 10. Galvanizing department
 - 11. Garage
 - 12. Bakelite department

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Legend to Sketch "B" - First Floor of the Plant

1. Special Products Department
2. Varnishing Department
3. First Assembly Department
4. Coil-winding Department
5. Electrical workshop
6. Gauge assembly shop
7. Chemical laboratory

Legend to Sketch "C" - Second Floor of the Plant

1. Chief Mechanic's Department
2. Chief Technologist's Department
3. Consumption meter assembly shop
4. Consumption meter calibration shop and electrical laboratory
5. Packing department

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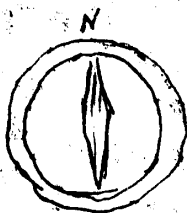
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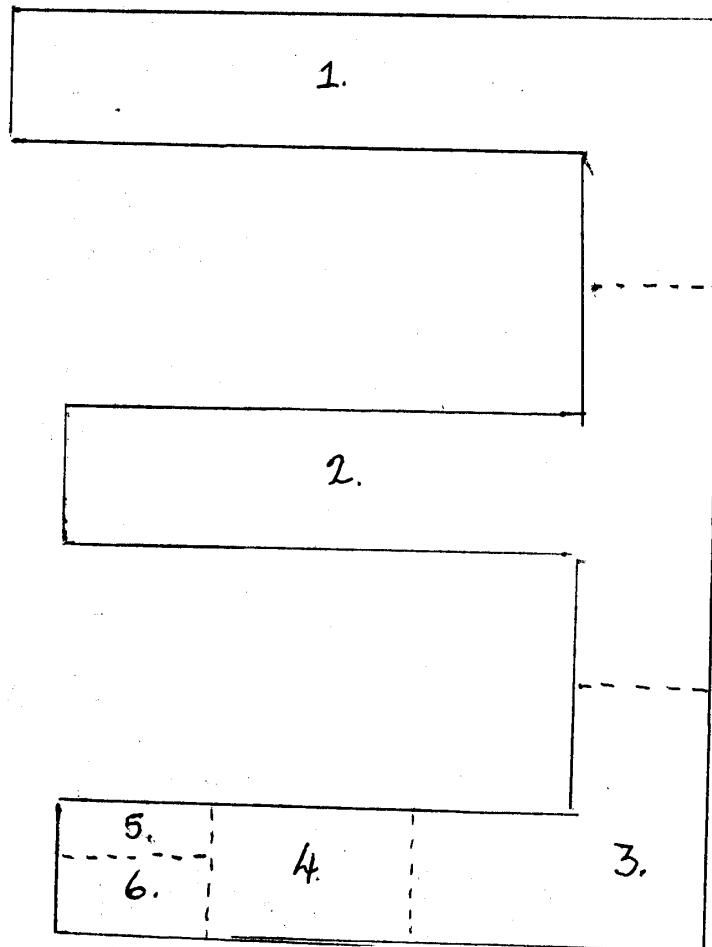
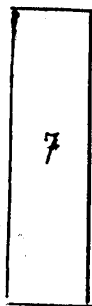
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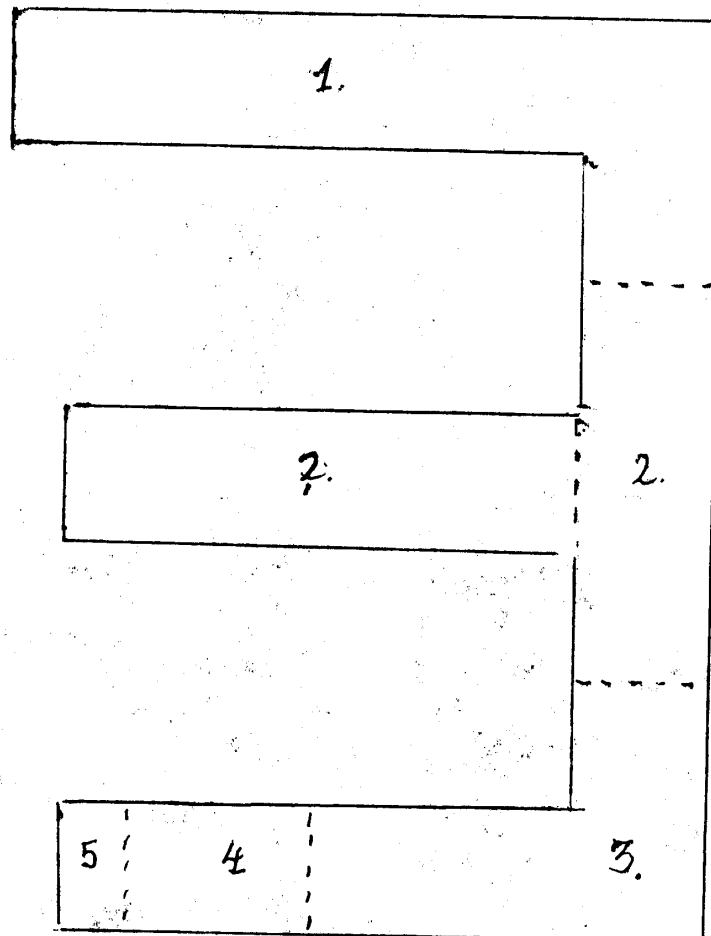


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